

IN THE CLAIMS

1-53 (canceled)

54. (new) An artificial peptide or polypeptide comprising a conformationally discriminating epitope (CDE) in its native conformation, wherein the CDE is structurally stabilized by circularization.

55. (new) The peptide or polypeptide claim 54, comprising artificial or glycosylated amino acids.

56. (new) The peptide or polypeptide claim 54, conjugated to a carrier molecule.

57. (new) The peptide or polypeptide of claim 54 comprising a CDE of an Fc receptor.

58. (new) The peptide or polypeptide of claim 57 comprising a CDE of FcγRIIb or FcγRIIa, the CDE comprising at least one residue which is unique to either FcγRIIb or FcγRIIa.

59. (new) The peptide or polypeptide of claim 58, wherein the CDE comprises amino acids 27 to 30, or amino acids 127 to 135 or amino acids 160 to 171 of FcγRIIb of SEQ ID NO: 2 or the corresponding amino acids of FcγRIIa of SEQ ID NO: 1, or the amino acid sequence of SEQ ID NO: 3.

60. (new) The peptide or polypeptide of claim 57 conjugated to FcγRIIIb or FcγRIIa.

61. (new) A method of producing a peptide carrying a conformationally discriminating epitope (CDE) for the generation of antibodies specifically recognizing a protein of interest carrying such an epitope, comprising:

- (a) providing a protein of interest,
- (b) identifying a CDE on said protein,
- (c) producing a peptide comprising the sequence of the CDE,
- (d) structurally stabilizing the peptide by circularization so that the CDE is present in its native conformation.

62. (new) The method of claim 61, wherein the circularization of the peptide is achieved by generating cysteine bridges, or by bridging amino acid side chains that form a pseudopeptide.

63. (new) The method of claim 61, wherein the peptide is generated using amino acids carrying glycosylation moieties which are present on the protein of interest.

64. (new) The method of claim 61, further comprising:

- (e) conjugating the peptide to a carrier molecule selected from haptens, polypeptides, peptides, and the protein of interest.

65. (new) A peptide or polypeptide comprising a CDE, obtained by the method of claim 61.

66. (new) A method comprising generating immunomodulatory substances specifically recognizing the CDE in its natural environment by providing the peptide or polypeptide of claim 54 as an immunogen in a environment suitable to generate the substance.

67. (new) A method comprising immunizing an animal or a transgenic animal expressing human FcγRIIa by administering an effective amount of the peptide or polypeptide of claim 59 to a subject in need thereof.

68. (new) A method comprising generating an antibody that can specifically recognize alleles of the FcγRIIa Arg/His polymorphism at position 131 or the FcγRIIa Val/Phe polymorphism at position 155 by providing an effective amount of the peptide or polypeptide of claim 59 in an environment effective to a subject to generate the antibody.

69. (new) A method of producing substances capable of discriminating between an antigen of interest and closely related antigens, comprising immunizing an animal with a peptide or polypeptide according to claim 59 or with a correctly folded peptide derived from FcγRIIb or FcγRIIa, or both, and isolating the resulting antibodies.

70. (new) A substance that specifically binds to the peptide or polypeptide of claim 54.

71. (new) An antibody or fragment or derivative thereof that specifically binds to human FcγRIIb or FcγRIIa in the natural environment of the Fc receptor.

72. (new) An antibody or fragment or derivative thereof of claim 71, that binds with higher affinity to FcγRIIb than to FcγRIIa.

73. (new) An antibody or fragment or derivative thereof of claim 71, that binds with higher affinity to FcγRIIa than to FcγRIIb.

74. (new) An antibody or fragment or derivative thereof of claim 71, that is able to specifically block IgG binding to human FcγRIIb or FcγRIIa.

75. (new) An antibody or fragment or derivative thereof of claim 71, that does not interfere with immune complex binding to FcγRIIb or FcγRIIa.

76. (new) An antibody or fragment or derivative thereof of claim 71, that inhibits the physiological function of human FcγRIIb or FcγRIIa.

77. (new) An antibody or fragment or derivative thereof of claim 71, that activates the physiological function of human FcγRIIb or FcγRIIa.

78. (new) An antibody or fragment or derivative thereof of claim 71, that specifically cross-links human FcγRIIb or FcγRIIa.

79. (new) An antibody or fragment or derivative thereof of claim 71, that is in a monomeric or multimeric state.

80. (new) An antibody or fragment or derivative thereof of claim 71, that is capable of binding to a CDE of FcγRIIb or FcγRIIa.

81. (new) An antibody or fragment or derivative thereof according to claim 80, that is capable of binding to an epitope of human FcγRIIb or FcγRIIa comprising at least one of amino acids 12, 27, 29, 30, 104, 127, 132, 135, 160 and 171 of the amino acid sequence of FcγRIIb or FcγRIIa according to SEQ ID NO: 1 or SEQ ID NO: 2.

82. (new) An antibody or fragment or derivative thereof according to claim 81, that is capable of binding to an epitope of FcγRIIb or FcγRIIa comprising amino acids 27 to 30, and/or 127 to 135, or 160 to 171 of the amino acid sequence of FcγRIIb or FcγRIIa according to SEQ ID NO: 1 or SEQ ID NO: 2.

83. (new) The antibody or fragment or derivative thereof of claim 71, that is a polypeptide carrying a complementarity determining region (CDR) which is specific for FcγRIIb.

84. (new) The antibody or fragment or derivative thereof of claim 83, that is a polypeptide carrying one or more of the CDR-sequences according to SEQ ID Nos: 5, 7, 9 and 11.

85. (new) An antibody or fragment or derivative thereof of claim 71, that is of the class IgG, IgE, IgM or IgA.

86. (new) An antibody or fragment or derivative thereof of claim 71, that is selected from single chain antibodies, bi-functional antibodies and tri-functional antibodies, Fab fragments, F(ab)₂ fragments, Fv fragments and scv-fragments.

87. (new) An antibody or part thereof according to claim 71, comprising the variable light or heavy regions of antibody GB3 according to SEQ ID NO: 5 and 7, or a portion thereof having specificity; or the variable light or heavy regions of antibody CE5 according to SEQ ID NO: 9 and 11 or a portion thereof having specificity.

88. (new) A nucleic acid sequence encoding the peptide of claim 58 or an antibody or fragment or derivative thereof that specifically binds to human FcγRIIb or FcγRIIa in the natural environment of the Fc receptor.

89. (new) The nucleic acid of claim 88 encoding the sequence of monoclonal antibodies CE5 or GB3 according to SEQ ID NOs: 4, 6, 8 and 10 or a portion thereof.

90. (new) A nucleic acid vector comprising the nucleic acid sequence according to claim 88.

91. (new) A host cell transfected with a vector according to claim 90.

92. (new) A pharmaceutical or diagnostic composition comprising an effective amount of the antibody, fragment or derivative thereof according to claim 71 and a pharmaceutically acceptable carrier substance.

93. (new) A diagnostic kit for the detection of autoimmune diseases or cancer, comprising the antibody, fragment or derivative thereof according to claim 71, or a recombinant peptide or polypeptide comprising a conformationally discriminating epitope (CDE) in its native conformation, wherein the CDE is structurally stabilized by circulization.

94. (new) A method comprising producing an inhibitor or activator of the FcγRIIa/IgG interaction or the FcγRIIb/IgG interaction by providing the antibody or fragment or derivative thereof of claim 71 in an environment to produce the inhibitor or activator.

95. (new) A method comprising diagnosing or treating an autoimmune disease, systemic lupus erythematosus, rheumatoid arthritis, immune thrombocytopenic purpura and multiple sclerosis, comprising administering the pharmaceutical or diagnostic composition of claim 92 to a subject in need of diagnosis or treatment of said disease.

96. (new) A method comprising administering the pharmaceutical or diagnostic composition of claim 92 to a subject in need thereof.

97. (new) The method of claim 96, wherein said composition is administered as an adjuvant with other biotherapeutics.

98. (new) The method of claim 97, wherein the other biotherapeutics are selected from the group consisting of antibodies Herceptin®, Rituxan®, IC14, PANOREX™, IMC-225, VITAXIN™, Campath 1H/LDP-03, LYMPHOCIDE™ und ZEVLIN™, and antibodies binding to the following cancer antigens: MAGE-1, MAGE-3, BAGE, GAGE-1, GAGE-2, N-acetylglucosaminyltransferase, p15, beta-catenin, MUM-1, CDK-4, HER-2/neu, human papillomavirus E6, human papillomavirus-E7 and MUC-1.

99. (new) A method comprising diagnosing or treating an allergy by administering an effective amount of the pharmaceutical composition of claim 92 to a subject in need thereof.

100. (new) A method comprising treating a disease associated with activated dendritic cells or macrophages by administering an effective amount of the pharmaceutical composition of claim 92 to a subject in need thereof.

101. (new) A method comprising treating host-versus-graft disease by administering an effective amount of the pharmaceutical composition of claim 92 to a subject in need thereof.

102. (new) A method comprising treating amyloid linked diseases by administering an effective amount of the pharmaceutical composition of claim 92 to a subject in need thereof.

103. (new) A method comprising administering to a subject the antibody or fragment or derivative of claim 71, wherein the antibody or fragment or derivative thereof comprises specific anti- FcγRIIa fragments in bi-specific antibodies to direct antigens towards transport by thrombocytes and/or uptake by the liver and spleen phagocytosis system of the subject.

104. (new) A method comprising administering to a subject the antibody or fragment or derivative thereof of claim 71, wherein the antibody or fragment or derivative thereof is a specific anti-FcγRIIa antibody or fragment thereof to diagnose or treat ITP in the subject.

105. (new) A method comprising producing a pharmaceutical composition comprising the antibody or fragment or derivative thereof of claim 71 wherein the pharmaceutical composition increases the effect of vaccination upon administration to a patient.

106. (new) An antibody or fragment or derivative thereof of claim 71 that is modified in the Fc-fragment by the modification of the glycosylation or mutagenesis to enhance the binding towards subsets of the Fc-receptors.

107. (new) The method of claim 69, further comprising generating recombinant immunomodulatory substances with antibodies.

108. (new) A nucleic acid sequence encoding the antibody, fragment or derivative of claim 71.

109. (new) A nucleic acid vector comprising the nucleic acid sequence according to claim 108.

110. (new) A host cell transfected with a vector according to claim 109.

111. (new) The method of claim 96, wherein said cancer is a lymphoma or a leukemia.